

16. A List of the Snakes of West Africa, from Mauritania to the French Congo. By G. A. BOULENGER, F.R.S., F.Z.S.

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(Text-figures 1 & 2.)

After an interruption of four years, due to the restrictions imposed on the Society's publications, I am now able to continue the series of lists of African Snakes, accompanied by artificial keys and arranged according to districts, with the object of facilitating identifications\*.

The present instalment deals with the western parts of Africa, from Mauritania to the French Congo inclusively. This division is as artificial as the keys, for we know a great many Snakes, until lately believed to be characteristic of West Africa, to extend across the great forest region as far as Uganda and the north-west of Lake Tanganyika. But it is convenient for practical purposes, especially if this list be used in conjunction with that dealing with the Belgian Congo, to which, however, many additions have been made since its publication†. Our knowledge of the Snakes of the interior of Africa is still so imperfect that attempts at mapping out the distribution must be regarded as very provisional.

The figures, in lieu of a glossary, which have already appeared in the 'Proceedings,' are here reproduced (text-figs. 1 & 2).

*Synopsis of the Families.*

- I. Worm-like, with small inferior mouth, eyes hidden or visible under the head shields, and body covered with uniform imbricate scales above and beneath.
- |   |              |
|---|--------------|
| Ocular shield not bordering the mouth; tail not or but little longer than broad; 18 scales or more round middle of body ... | TYPHILOPIDE. |
| Ocular shield bordering the mouth; 14 scales round middle of body .....   | GLAUCONIDE.  |
- II. Mouth large, eyes distinct, exposed; body with enlarged shields beneath.
- |   |            |
|---|------------|
| Ventral shields much narrower than the body; supraocular, if distinct, broken up into two or more shields .....                           | BOIDE.     |
| Ventral shields at least nearly as broad as the body; supraocular single; poison-fangs, if below the eye, preceded by smaller teeth ..... | COLUBRIDE. |
| Ventral shields nearly as broad as the body; large poison-fangs in a very large sheath below the eye .....                                | VIPERIDE.  |

Family TYPHILOPIDE.

A single genus.

1. TYPHILOPS.

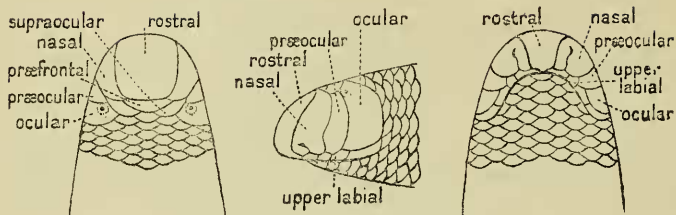
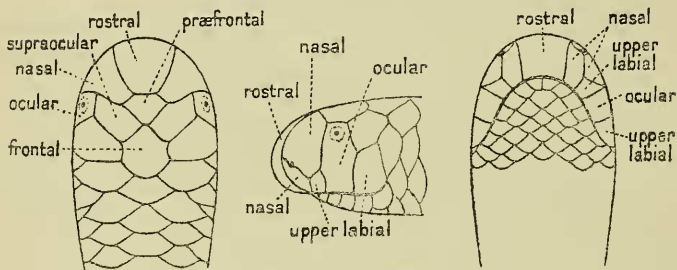
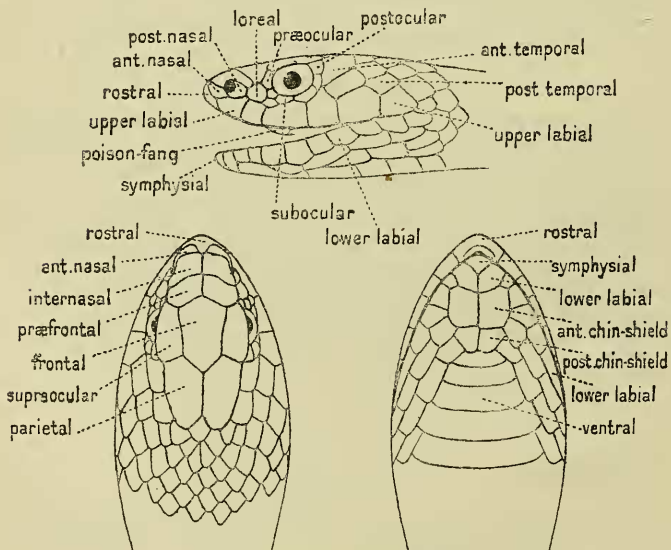
Schneid. Hist. Amph. ii. p. 339; Bouleng. Cat. Sn. i. p. 7

\* P. Z. S. 1915, pp. 193, 369, 611, 641.

† Cf. Boulenger, Ann. Zool. Afr. vii. 1919, p. 1.

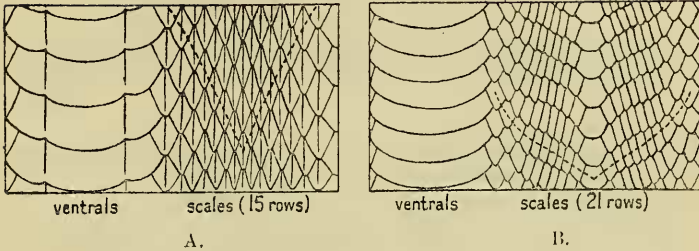
## Text-figure 1.

(From P. Z. S. 1915, p. 612.)

**TYPHLOPS PUNCTATUS.****GLAUCONIA EMINI.****CAUSUS RHOMBEATUS.**

Text-figure 2.

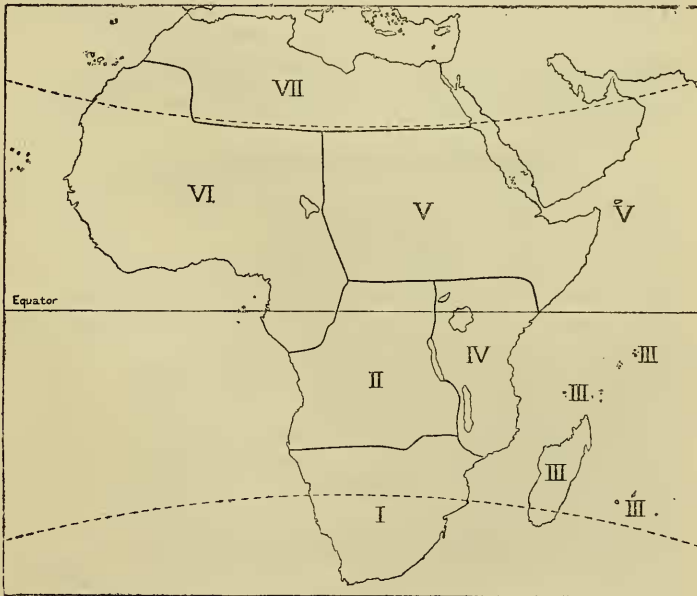
(From P. Z. S. 1915, p. 613.)



Scaling of thickest part of body.

- A. *Gastropyxis smaragdina*, with keeled scales and bicarinate ventral shields.
- B. *Dipsadomorphus blandinii*, with oblique scales and enlarged vertebrales.

The present list deals with Division VI. of the following map:—



Division of Africa into seven districts.

*Synopsis of the Species.*

I. No subocular; ocular in contact with two or three upper labials.

A. Rostral not more than one-third width of head; nasal completely divided into two; diameter of body 35 to 50 times in total length.

- 20 scales round middle of body; eyes distinct; anterior part of nasal extending to upper surface of head ..... *T. braminnus*.  
 18 scales round middle of body; eyes hidden ..... *T. caecatus*.  
 22 scales round middle of body; eyes just distinguishable ..... *T. leucostictus*.

B. Rostral at least half width of head.

1. Nasal completely divided into two; præocular much narrower than the ocular; eyes distinct.

- 18 or 20 scales round middle of body, the diameter of which is 36 to 49 times in total length ..... *T. elegans*.  
 24 scales round middle of body, the diameter of which is 66 times in total length ..... *T. decorosus*.

2. Nasal incompletely divided; snout (seen from above) rounded.

a. Eyes hidden.

- 28 scales round middle of body, the diameter of which is 39 to 40 times in total length; præocular much narrower than ocular ..... *T. latesii*.  
 28 scales round middle of body, the diameter of which is 19 times in total length; præocular much narrower than ocular ..... *T. hallowelli*.  
 24 scales round middle of body, the diameter of which is 53 times in total length; præocular nearly as broad as ocular. *T. buchholzi*.

b. Eyes distinguishable; 24 to 30 scales round middle of body.

- Diameter of body 41 to 45 times in total length; præocular a little narrower than ocular ..... *T. steinhausi*.  
 Diameter of body 21 to 32 times in total length; præocular much narrower than ocular ..... *T. punctatus*.

3. Nasal completely divided; præocular as large as ocular; snout (seen from above) pointed; eyes hidden; tail without terminal spine.

- Snout obtusely pointed; 22 scales round middle of body, the diameter of which is 54 times in total length ..... *T. crossi*.  
 Snout obtusely pointed; 20 scales round middle of body, the diameter of which is 51 times in total length ..... *T. feæ*.  
 Snout acutely pointed; 22 scales round middle of body, the diameter of which is 62 to 66 times in total length ..... *T. principis*.

II. A subocular separates the ocular from the upper labials; eyes hidden.

- 18 scales round middle of body, the diameter of which is 35 to 45 times in total length; snout rounded; rostral  $\frac{1}{4}$  width of head; no caudal spine ..... *T. zenkeri*.  
 20 scales round middle of body, the diameter of which is 70 times in total length; rostral large, with obtuse horizontal edge; a small caudal spine ..... *T. rufescens*.  
 22 scales round middle of body, the diameter of which is 60 to 74 times in total length; rostral large, with sharp horizontal edge; a small caudal spine ..... *T. caecus*.  
 28 scales round middle of body, the diameter of which is 55 to 70 times in total length; rostral large, with sharp horizontal edge; no caudal spine ..... *T. newtonii*.

1. *TYPHLOPS BRAMINUS* Daud.

Bouleng. Cat. Sn. i. p. 16.

Southern Asia; islands of the Indian Ocean; South Africa;



Lagos (*vide* Peters); Mexico.—Distribution probably ascribable to transport by human agency.

2. *TYPHLOPS CÆCATUS* Jan, Icon. Gén. p. 9, l. 3, pls. iv. & v. fig. 2; Bouleng. t. c. p. 32.

Gold Coast.

3. *TYPHLOPS LEUCOSTICTUS* Bouleng. Ann. & Mag. N. H. (7) i. 1898, p. 124.

Liberia.

4. *TYPHLOPS ELEGANS* Peters, Mon. Berl. Ac. 1868, p. 450, pl. ii. fig. 1; Bouleng. Cat. Sn. i. p. 37.

Prince's Id., Gulf of Guinea.

5. *TYPHLOPS DECOROSUS* Buchh. & Peters, Mon. Berl. Ac. 1875, p. 197.

Cameroon.

6. *TYPHLOPS BATESII* Bouleng. Ann. & Mag. N. H. (8) viii. 1911, p. 371.

Cameroon.

7. *TYPHLOPS HALLOWELLI* Jan, Icon. Gén. p. 29, l. 4, pls. iv. & v. fig. 6; Bouleng. Cat. Sn. i. p. 40.

Gold Coast.

8. *TYPHLOPS BUCHHOLZI* Peters, Sitzb. Ges. Nat. Fr. Berl. 1881, p. 71; Bouleng. Cat. Sn. i. p. 41.

Cameroon.

9. *TYPHLOPS STEINHAUSI* Werner, Jahrb. Hamb. Wiss. Anst. xxvi. 2, 1909, p. 209.

Cameroon.

10. *TYPHLOPS PUNCTATUS* Leach.

Bouleng. Cat. Sn. i. p. 42.

*Typhlops bocagyi* Bethencourt Ferreira, Journ. Sc. Lisb. (2) vii. 1904, p. 114.

*Typhlops adolphi* Sternf. Mitt. Zool. Mus. Berl. v. 1910, p. 70.

? *Typhlops lubius* Chaban. Bull. Mus. Paris, 1916, p. 364, fig.

Tropical Africa, as far north as the Gambia and Uganda.

11. *TYPHLOPS CROSSI* Bouleng. Cat. Sn. i. p. 52, pl. iii. fig. 5.

Southern Nigeria.

12. *TYPHLOPS FEE* Bouleng. Ann. Mus. Genova, (3) ii. 1906, p. 209, fig.

San Thomé Id., Gulf of Guinea.

13. *TYPHLOPS PRINCIPIS* Bouleng. l. c. fig.

Prince's Id., Gulf of Guinea.

14. TYPHLOPS ZENKERI Sternf. Sitzb. Ges. Nat. Fr. Berl. 1908, p. 92.  
*Typhlops cernis* Bouleng. Ann. & Mag. N. H. (8) xiv. 1914, p. 482.  
 Cameroon.
15. TYPHLOPS RUFESCENS Chaban, Bull. Mus. Paris, 1916, p. 375, fig. (1917).  
 French Congo.
16. TYPHLOPS CÆCUS.  
*Oxychocephalus cæcus* A. Dum. Rev. et Mag. Zool. 1856, p. 462, pl. xxi. fig. 4.  
*Typhlops cæcus* Bouleng. Cat. Sn. i. p. 55.  
 Sierra Leone to Congo.
17. TYPHLOPS NEWTONII Bocage, Journ. Sc. Lisb. (2) ii. 1891, p. 61; Bouleng. l. c.  
 I. das Rolas, Gulf of Guinea.

Family GLAUCONIIDÆ.

A single genus.

I. GLAUCONIA.

Gray, Cat. Liz. p. 139; Bouleng. Cat. Sn. i. p. 59.

*Synopsis of the Species.*

I. A single upper labial between the nasal and the ocular.

- First upper labial as large as or a little smaller than lower part of nasal; diameter of body 38 to 50 times in total length; tail 5 to 10 times as long as broad ..... *G. narirostris*.  
 First upper labial much smaller than lower part of nasal; diameter of body 55 times in total length; tail about 5 times as long as broad ..... *G. boueti*.  
 First upper labial much smaller than lower part of nasal; diameter of body 57 times in total length; tail hardly twice as long as broad ..... *G. brevicauda*.

II. Two upper labials between the nasal and the ocular.

- Second upper labial twice as large as first but much smaller than the ocular; diameter of body 42 times in total length ..... *G. sundevalli*.  
 Second upper labial very large, nearly as large as the ocular; diameter of body 38 to 43 times in total length ..... *G. gestri*.  
 First and second upper labials small; diameter of body 50 to 65 times in total length ..... *G. bicolor*.  
 First and second upper labials small; diameter of body 78 times in total length ..... *G. gruveli*.

I. GLAUCONIA NARIROSTRIS.

*Stenostoma narirostre* Peters, Mon. Berl. Ac. 1867, p. 708, pl. —, fig. 2.

*Glauconia narirostris* Bouleng. Cat. Sn. i. p. 65.

Lagos, S. Nigeria, Cameroon.

2. *GLAUCONIA BOUETI* Chaban. Bull. Mus. Paris 1917, p. 9, figs.

French Soudan.

3. *GLAUCONIA BREVICAUDA*.

*Stenostoma brevicauda* Bocage, Journ. Sc. Lisb. xi. 1887, p. 194.  
*Glauconia brevicauda* Bouleng. t. c. p. 67.

Dahomey and Ashantee.

4. *GLAUCONIA SUNDEVALLI*.

*Stenostoma sunderalli* Jan. Arch. Zool. Anat. Phys. i. 1862, p. 191.

*Glauconia sunderalli* Bouleng. t. c. p. 68.

Togoland.

5. *GLAUCONIA GESTRI* Bouleng. Ann. Mus. Genova, (3) ii. 1906, p. 210, fig.

Fernando Po and Cameroon.

6. *GLAUCONIA BICOLOR*.

*Stenostoma bicolor* Jan, Icon. Gén. p. 40, l. 1, pl. v. fig. 15.

*Glauconia bicolor* Bouleng. Cat. Sn. i. p. 69.

Gold Coast, Togoland.

7. *GLAUCONIA GRUVELI*.

*Glauconia bicolor gruvelli* Chaban. Bull. Mus. Paris, 1916, p. 367 (1917)\*.

Dahomey.

#### Family B O I D E E.

Three genera :—

Head distinct from neck, with shields above; rostral and anterior upper labials with deep pits; subcaudals paired .....	<i>Python.</i>
Head not distinct from neck, with shields above; tail short, rounded at the end, with single subcaudals .....	<i>Calabaria.</i>
Head not distinct from neck, with small scales above; tail short, pointed, with single subcaudals .....	<i>Eryx.</i>

#### 1. PYTHON.

Daud. Hist. Rept. v. p. 266 ; Bouleng. Cat. Sn. i. p. 85.

Two species :—

2 upper labials pitted ; scales in 81-93 rows ; subcaudals 63-77 .....	<i>P. sebae.</i>
4 upper labials pitted ; scales in 53-63 rows ; subcaudals 30-37 .....	<i>P. regius.</i>

\* In comparing this snake with *G. bicolor*, M. Chabanaud has, through an oversight, given the length of the tail as the diameter.

## 1. PYTHON SEBÆ.

*Coluber sebæ* Gmel. S. N. i. p. 1118.

*Python sebæ* Bouleng. t. c. p. 86.

Tropical and South Africa.

## 2. PYTHON REGIUS.

*Boa regia* Shaw, Zool. iii p. 347, pl. xevi.

*Python regius* Bouleng. t. c. p. 88.

Senegambia to Niger, eastwards to the Egyptian Soudan.

## 2. CALABARIA.

Gray, P. Z. S. 1858, p. 154; Bouleng. Cat. Sn. i. p. 92.

## 1. CALABARIA REINHARDTI.

*Eryx reinhardti* Schleg. Bijdr. tot de Dierk. i. p. 2, pl. —.

*Calabaria reinhardti* Bouleng. l. c.

Liberia to Congo, eastwards to the Ituri.

## 3. ERYX.

Daud. Hist. Rept. vii. p. 251; Bouleng. Cat. Sn. i. p. 122.

## 1. ERYX MUELLERI.

*Gongylophis muelleri* Bouleng. Ann. & Mag. N. H. (6) ix. 1892, p. 74.

*Eryx muelleri* Bouleng. Cat. Sn. i. p. 128, pl. v. fig. 2.

Mauritania, N. Nigeria, Togoland, Egyptian Soudan.

## Family COLUBRIDÆ.

Three parallel series :—

No poison-fangs; all the teeth solid .....	A. Aglypha.
Poison-fangs behind .....	B. Opisthoglypha.
Poison-fangs in front .....	C. Proteroglypha.

## A. Aglypha.

## 1. Loreal present.

## A. Rostral without angular horizontal edge.

1. Pupil round; a single anterior temporal; not more than two upper labials entering the eye; body not very slender, with not more than 165 ventrals; subcaudals not more than 95; scales not at all oblique; anal usually divided (if entire, scales smooth in 17 rows).

Two internasals .....	<i>Tropidonotus</i> .
A single internasal; nasal semidivided; scales in 25 rows .....	<i>Helicops</i> .
A single internasal; nostril between two nasals; scales in 21 or 23 rows .....	<i>Hydrathlops</i> .

2. Pupil round; a deep concavity on the side of the snout, between the nostril and the eye; anal entire.

Scales keeled, in 23 rows .....	<i>Bothrophthalmus</i> .
Scales smooth, in 17 or 19 rows .....	<i>Bothrolycus</i> .

3. Pupil vertically elliptic; anal entire.
- a. Scales smooth, vertebral row not enlarged; subcaudals less than 75.  
Scales in 23 to 33 rows ..... *Boodon.*  
Scales in 17 rows ..... *Lycophidium.*
  - b. Scales of vertebral row enlarged.  
Scales smooth, head very distinct from neck ..... *Hormonotus.*  
Scales keeled, vertebrals bicarinate; anterior teeth not enlarged. .... *Goniootophis.*  
Scales keeled, vertebrals bicarinate; anterior teeth strongly enlarged ..... *Simocephalus.*
  - 4. Pupil round; two superposed anterior temporals, or, if anterior temporal single, 3 upper labials entering the eye, or ventrals more than 165.  
a. Scales not oblique, in 31 rows; ventrals 245-254 ... *Zamenis.*  
b. Scales more or less oblique, at least on the anterior part of the body, in 13 to 19 rows; body usually very slender (Tree-Snakes).  
a. Scales in 13 or 15 rows, of vertebral row not enlarged, laterals as long as dorsals.  
\* Scales smooth.  
Subcaudal shields not keeled ..... *Chlorophis.*  
Subcaudal shields keeled on each side and with a notch corresponding to the keel, same as on the ventrals ..... *Philothamnus.*  
\*\* Scales keeled.  
Subcaudal shields keeled and notched on each side; a single anterior temporal ..... *Gastropyxis.*  
Subcaudal shields not keeled; usually two superposed anterior temporals ..... *Hapsidophrys.*  
β. Scales in 13 or 15 rows, very oblique, laterals shorter than dorsals; eye very large ..... *Thrasops.*  
γ. Scales in 17 or 19 rows, very oblique; eye very large ..... *Rhamnophis.*  
c. Scales not oblique, in 15 to 21 rows.  
A single anterior temporal; ventrals 171-224; rostral not twice as broad as deep ..... *Coronella.*  
Two superposed anterior temporals; ventrals 125-168 ..... *Graya.*  
B. Rostral very large, with angular horizontal edge.  
Eye in contact with labials; scales in 15 rows ..... *Prosymna.*  
Suboculars separate the eye from the labials; scales in 19 to 25 rows ..... *Scaphiophis.*
  - II. No loreal, nasal in contact with preocular.  
Eye small, with round pupil; no internasals, prefrontal single; scales smooth, in 15 rows ..... *Pacilopholis.*  
Eye moderate or rather large, with vertical pupil; a pair of internasals and a pair of prefrontals; scales strongly keeled, in 20 to 27 rows ..... *Dasyplettis.*

1. TROPIDONOTUS.

Kuhl, Bull. Sc. Nat. ii. 1824, p. 81; Bouleng. Cat. Sn. iii. p. 192.

*Synopsis of the Species.*

- I. Scales smooth; two upper labials entering the eye.  
Scales in 17 rows; ventrals 117-135; anal usually entire; subcaudals 75-95 ..... *T. fuliginoides.*  
Scales in 15 rows; ventrals 125-143; anal divided; subcaudals 68-77 ..... *T. variegatus.*  
Scales in 19 rows; ventrals 131-150; anal divided; subcaudals 55-95 ..... *T. olivaceus.*
- II. Scales strongly keeled, in 21-27 rows; suboculars separate the eye from the labials ..... *T. feror.*

## 1. TROPIDONOTUS FULIGINOIDES.

*Coronella fuliginoides* Günth. Cat. Col. Sn. p. 39.*Tropidonotus fuliginoides* Bouleng. t. c. p. 217.

Gold Coast to Congo.

## 2. TROPIDONOTUS VARIEGATUS.

*Mizodon variegatus* Peters, Mon. Berl. Ac. 1861, p. 358.*Tropidonotus variegatus* Bouleng. l. c.

Gold Coast to Cameroon.

## 3. TROPIDONOTUS OLIVACEUS.

*Coronella olivacea* Peters, Mon. Berl. Ac. 1854, p. 622.*Tropidonotus olivaceus* Bouleng. t. c. p. 227.

Tropical Africa, from the Soudan to Namaqualand and Southern Rhodesia.

4. TROPIDONOTUS FEROX Günth. Ann. &amp; Mag. N. H. (3) xii. 1863, p. 355, pl. vi. fig. F; Bouleng. t. c. p. 241.

Sierra Leone to Calabar.

## 2. HELICOPS.

Wagler, Syst. Amph. p. 170; Bouleng. Cat. Sn. i. p. 272.

1. HELICOPS GENDRII Bouleng. Ann. &amp; Mag. N. H. (3) v. 1910, p. 512.

French Guinea.

## 3. HYDRÆTHIOPS.

Günth. Ann. &amp; Mag. N. H. (4) ix. 1872, p. 28; Bouleng. Cat. Sn. i. p. 280.

Two species:—

Scales keeled, in 25 rows; ventrals 143-156; 5th and 6th or 6th and 7th upper labials entering eye.....	<i>H. melanogaster.</i>
Scales smooth, in 21 rows; ventrals 154-165; 4th and 5th upper labials entering eye, 6th and 7th in contact with parietal...	<i>H. levis.</i>

1. HYDRÆTHIOPS MELANOGASTER Günth. Ann. &amp; Mag. N. H. (4) ix. 1872, p. 28, pl. iii. fig. G; Bouleng. t. c. p. 281.

Cameroon to Congo, eastwards to the Ituri.

2. HYDRÆTHIOPS LEVIS Bouleng. Ann. &amp; Mag. N. H. (7) xiii. 1904, p. 450.

Cameroon.

## 4. BOTHROPHTHALMUS.

Peters, Mon. Berl. Ac. 1863, p. 287; Bouleng. Cat. Sn. i. p. 324.

## 1. BOTHROPHTHALMUS LINEATUS.

*Elaphis (Bothrophthalmus) lineatus* Peters, l. c.*Bothrophthalmus lineatus* Bouleng. l. c.

West and Central Africa, from the Gold Coast and Uganda to the Congo.

5. BOTHROLYCUS.

Günth. P. Z. S. 1874, p. 444; Bouleng. Cat. Sn. i. p. 325.

1. BOTHROLYCUS ATER Günth. l. c. pl. lvii. fig. B; Bouleng. t. c. p. 326.

*Pseudoboodon albopunctatus* Anderss. Bih. Svensk. Ak. xxvii. iv. no. 5, 1901, p. 6, pl. i. figs. 2-4.

*Pseudoboodon brevicaudatus* Anderss. t. c. p. 8.

Cameroon, Fernando Po, Ituri.

6. BOODON.

Dum. & Bibr. Mém. Ac. Sc. xxiii. 1853, p. 460; Bouleng. Cat. Sn. i. p. 327.

*Synopsis of the Species.*

I. Subcaudals in two rows.

A. Scales in 23 (very rarely 25) rows; belly blackish brown with the middle line yellowish ..... *B. virgatus.*

B. Scales in 25 to 33 rows.

Parietal shields longer than distance between frontal and end of snout; 2 (very rarely 3) upper labials entering the eye ..... *B. lineatus.*

Parietal shields longer than distance between frontal and end of snout; 3 upper labials entering the eye ..... *B. bedriagæ.*

Parietal shields as long as distance between frontal and end of snout. *B. fuliginosus.*

II. Subcaudals single; scales in 25 to 29 rows ..... *B. olivaceus.*

1. BOODON VIRGATUS.

*Cerelopeltis virgata* Hallow. Proc. Ac. Philad. 1854, p. 98.

*Boodon virgatus* Bouleng. t. c. p. 331.

Gold Coast to Calabar; East Africa (?).

2. BOODON LINEATUS Dum. & Bibr. Erp. Gén. vii. p. 363; Bouleng. t. c. p. 332.

Tropical and South Africa and South Arabia.

3. BOODON BEDRIAGÆ Bouleng. Ann. Mus. Genova, (3) ii. 1906, p. 211.

S. Thomé and Prince's Id., Gulf of Guinea.

4. BOODON FULIGINOSUS.

*Lycodon fuliginosus* Boie, Isis, 1827, p. 551.

*Boodon fuliginosus* Bouleng. t. c. p. 334.

Mauritania to N. Nigeria, eastwards to the Egyptian Soudan.

5. BOODON OLIVACEUS.

*Holuropholis olivaceus* A. Dum. Rev. et Mag. Zool. 1856, p. 466

*Boodon olivaceus* Bouleng. t. c. p. 335.

West and Central Africa, from Nigeria and Uganda to the Congo.



## 7. LYCOPHIDIUM.

Dum. & Bibr. Mém. Ac. Sc. xxiii. 1853, p. 462; Bouleng. Cat. Sn. i. p. 336.

*Synopsis of the Species.*

I. Loreal separated from the eye by the præocular.

A. 8 upper labials.

1. Parietals considerably longer than distance between frontal and end of snout.  
 2 labials entering the eye, the diameter of which equals its distance from the mouth; ventrals 174-199; subcaudals 32-44 ... *L. laterale*.  
 3 labials entering the eye, the diameter of which exceeds its distance from the mouth; ventrals 164-208; subcaudals 24-47... *L. capense*.  
 2. Parietals not or but slightly longer than distance between frontal and end of snout.  
 3 labials entering the eye, the diameter of which is greater than its distance from the mouth; ventrals 164-193; subcaudals 32-53 ..... *L. irroratum*.  
 3 labials entering the eye, the diameter of which is but slightly greater than its distance from the mouth; ventrals 188-219; subcaudals 34-55 ..... *L. semicinctum*.  
 B. 7 upper labials; ventrals 178-198; subcaudals 30-53 ..... *L. fasciatum*.

II. Loreal entering the eye.

- 7 upper labials; ventrals 185; subcaudals 43 ..... *L. weneri*.  
 8 upper labials; ventrals 225-253; subcaudals 66-74 ..... *L. elapoides*.

1. LYCOPHIDIUM LATERALE Hallow. Proc. Ac. Philad. 1857, p. 58; Bouleng. t. c. p. 338.

Gold Coast to Congo.

2. LYCOPHIDIUM IRRORATUM.

*Coluber irroratus* Leach, in Bowdich, Miss. Ashant. p. 494.

*Lycophidium irroratum* Bouleng. t. c. p. 340.

Senegambia to Gold Coast and N. Nigeria.

3. LYCOPHIDIUM CAPENSE.

*Lycodon capensis* A. Smith, S. Afr. Quart. Journ. (1) no. 5, 1831, p. 18.

*Lycophidium capense* Bouleng. t. c. p. 339.

Tropical and South Africa.

4. LYCOPHIDIUM SEMICINCTUM Dum. & Bibr. Erp. Gén. vii. p. 414; Bouleng. t. c. p. 341.

Senegambia, French Guinea, N. Nigeria; East Africa (?).

5. LYCOPHIDIUM FASCIATUM.

*Alopecion fasciatum* Günth. Cat. Col. Sn. p. 196.

*Lycophidium fasciatum* Bouleng. t. c. p. 342.

Sierra Leone to Gaboon, eastwards to the Congo Forest west of Mt. Ruwenzori.

6. LYCOPHIDIUM WENERI Mocquard, Bull. Mus. Paris, 1902, p. 411.

Gaboon.

7. *LYCOPHIDIUM ELAPOIDES* Günth. P. Z. S. 1874, p. 444;  
Bouleng. t. c. p. 343.

Cameroon.

8. *HORMONOTUS*.

Hallow. Proc. Ac. Philad. 1857, p. 56; Bouleng. Cat. Sn. i.  
p. 343.

1. *HORMONOTUS MODESTUS*.

*Lamprophis modestus* Dum. & Bibr. Erp. Gén. vii. p. 429.

*Hormonotus modestus* Bouleng. l. c.

Gold Coast to Gaboon.

9. *GONIONOTOPHIS*.

Bouleng. Cat. Sn. i. p. 323.

*Synopsis of the Species.*

I. Scales strongly keeled.

Loreal and praefrontal entering the eye; scales in 21 rows; ventrals  
175-185; subcaudals 73-95..... *G. brussaui*.  
Loreal separated from the eye by a præocular; scales in 19 rows;  
ventrals 167-173; subcaudals 90-94..... *G. klingii*.

II. Scales rather feebly keeled, in 15 rows (19 on neck).

Loreal twice as long as deep; ventrals 167-173; subcaudals 67 ..... *G. grantii*.  
Loreal as long as deep or a little longer; ventrals 210-211; sub-  
caudals 47-54..... *G. microps*.

1. *GONIONOTOPHIS BRUSSAUXI*.

*Gonionotus brussaui* Mocquard, Bull. Soc. Philom. (8) i. 1889,  
p. 146, pl. ii.

*Gonionotus vossi* Boettg. Zool. Anz. 1892, p. 418.

*Gonionotophis brussaui* & *vossi* Bouleng. t. c. p. 323.

? *Simocephalus insignis* Chaban. Bull. Mus. Paris, 1916, p. 369,  
fig.

Cameroon to Congo.

2. *GONIONOTOPHIS KLINGII* Matschie, Sitzb. Ges. Nat. Fr. Berl.

1893, p. 172; Bouleng. Cat. Sn. iii. p. 614.

Togoland.

3. *GONIONOTOPHIS GRANTII*.

*Simocephalus grantii* Günth. Ann. & Mag. N. H. (3) xii. 1863,  
p. 361.

*Gonionotophis grantii* Bouleng. Cat. Sn. i. p. 324, pl. xxiii. fig. 1.

N. Nigeria, Gold Coast, Togoland.

4. *GONIONOTOPHIS MICROPS* Bouleng. Ann. & Mag. N. H. (8)  
viii. 1911, p. 370.

Cameroon.

## 10. SIMOCEPHALUS.

Güntli. Cat. Col. Sn. p. 194; Bouleng. Cat. Sn. i. p. 344.

*Synopsis of the Species.*

- I. Scales in 15 rows on body; temporals 1+2 (rarely 1+3).
- A. Eye much larger than nostril.
1. Ventrals 203-255; subcaudals 45-70.
- a. 2 labials (3rd and 4th) entering the eye.
- Scales with parallel secondary keels or tubercles; loreal present. *S. capensis.*
- Scales with strong striation directed obliquely towards the keel; loreal absent ..... *S. phyllopholis.*
- b. 3 labials (3rd, 4th, 5th) entering the eye, unless 5th separated by a subocular detached from it.
- Scales strongly keeled, with strong striation directed obliquely towards the keel ..... *S. guirali.*
- Scales feebly keeled ..... *S. baumanni.*
2. Ventrals 239-262; subcaudals 75-124; scales without secondary keels ..... *S. poensis.*
3. Ventrals 178; subcaudals 62 ..... *S. rostralis.*
- B. Eye scarcely larger than the nostril; scales feebly keeled; ventrals 205-228; subcaudals 49-59 ..... *S. stenophthalmus.*
- II. Scales in 17 or 19 rows on body; ventrals 229-234; subcaudals 53-68.
- Scales in 17 rows; temporals 2+3 ..... *S. crossi.*
- Scales in 19 rows; temporals 1+2 ..... *S. riggenbachi.*

## 1. SIMOCEPHALUS CAPENSIS.

*Heterolepis capensis* A. Smith, Ill. Zool. S. Afr., Rept. pl. lv.

*Simocephalus capensis* Bouleng. t. c. p. 345.

Gaboon, E. Africa, Nyassaland, Natal.

## 2. SIMOCEPHALUS PHYLLOPHOLIS Werner, Zool. Anz. xxiv. 1901, p. 301.

Cameroon.

## 3. SIMOCEPHALUS GUIRALI.

*Heterolepis guirali* Mocquard, Bull. Soc. Philom. (7) viii. 1884, p. 145.

*Simocephalus guirali* Bouleng. t. c. p. 346.

Cameroon to Congo.

## 4. SIMOCEPHALUS BAUMANNI Sternf. Mitt. Zool. Mus. Berl. iv. 1908, p. 214.

Togoland.

## 5. SIMOCEPHALUS POENSIS.

*Heterolepis poensis* A. Smith, Ill. Zool. S. Afr., Rept.

*Simocephalus poensis* Bouleng. t. c. p. 346.

Sierra Leone to Congo and Uganda.

## 6. SIMOCEPHALUS ROSTRALIS Sternf. Mitt. Zool. Mus. Berl. v. 1910, p. 63.

Cameroon.

7. SIMOCEPHALUS STENOPHTHALMUS.

*Heterolepis stenophthalmus* Mocquard, Bull. Soc. Philom. (7) xi. 1887, p. 16, pl. i. fig. 1.

*Simocephalus stenophthalmus* Bouleng. t. c. p. 347.

Gold Coast, Togoland, Gaboon.

8. SIMOCEPHALUS CROSSI Bouleng. Cat. Sn. iii. p. 618.

S. Nigeria.

9. SIMOCEPHALUS RIGGENBACHI Sternf. Mitt. Zool. Mus. Berl. v. 1910, p. 63.

Cameroon.

11. ZAMENIS.

Wagl. Syst. Amph. p. 188; Bouleng. Cat. Sn. i. p. 379.

1. ZAMENIS DORRI.

*Periops dorri* Lataste, Le Natural. 1888, p. 227.

*Zamenis dorri* Bouleng. t. c. p. 410.

Senegal.

12. CHLOROPHIS.

Hallow. Proc. Ac. Philad. 1857, p. 52; Bouleng. Cat. Sn. ii. p. 91.

*Synopsis of the Species.*

- |  |                            |
|--|----------------------------|
| I. No trace of ventral keels: ventrals 152-166; subcaudals 85-99.....                                      | <i>C. ornatus.</i>         |
| II. Ventrals with more or less distinct lateral keel.  |                            |
| A. Anal divided; scales in 15 rows.  |                            |
| Præocular separated from frontal; body very slender anteriorly; ventrals 175-190; subcaudals 115-190 ..... | <i>C. heterolepidotus.</i> |
| Præocular in contact with or narrowly separated from frontal; ventrals 150-182; subcaudals 90-133 .....    | <i>C. irregularis.</i>     |
| B. Anal entire; ventrals 141-162; subcaudals 75-96.  |                            |
| Scales in 15 rows.....   | <i>C. heterodermus.</i>    |
| Scales in 13 rows.....   | <i>C. carinatus.</i>       |

1. CHLOROPHIS ORNATUS.

*Philothamnus ornatus* Bocage, Journ. Sc. Lisb. ii. 1872, p. 80.

*Chlorophis ornatus* Bouleng. t. c. p. 93.

Portuguese Guinea, Angola.

2. CHLOROPHIS HETEROLEPIDOTUS.

*Ahaetulla heterolepidota* Günth. Ann. & Mag. N. H. (3) xi. 1863, p. 286.

*Chlorophis heterolepidotus* Bouleng. t. c. p. 95, pl. v. fig. 3.

*Chlorophis gracilis* Sternf. Mitt. Zool. Mus. Berl. v. 1910, p. 64.

Gold Coast to Angola, eastwards to the coast of Zanzibar.

## 3. CHLOROPHIS IRREGULARIS.

*Coluber irregularis* Leach, in Bowdich, Miss. Ashant. p. 494.

*Chlorophis irregularis* Bouleng. t. c. p. 96.

Senegambia and Uganda to Damaraland and S. Rhodesia.

4. CHLOROPHIS HETERODERMUS Hallow. Proc. Ac. Philad. 1857, p. 54; Bouleng. t. c. p. 97.

Sierra Leone to Congo, eastwards to L. Tanganyika.

5. CHLOROPHIS CARINATUS Anders. Bih. Sv. Ak. Handl. xxvii. iv. no. 5, 1901, p. 9.

Cameroon to Congo, eastwards to the Ituri and the Stanley Falls.

## 13. PHILOTHAMNUS.

A. Smith, Ill. Zool. S. Afr., Rept.; Bouleng. Cat. Sn. ii. p. 98.

*Synopsis of the Species.*

## I. Scales in 15 rows.

A. Subcaudals 110-155.

Temporals usually 2+2; ventrals 166-207..... *P. semivariatus.*

Temporals 1+2 or 2+2; ventrals 150-165..... *P. nitidus.*

Temporals 1+1; ventrals 167-190..... *P. dorsalis.*

B. Subcaudals 160-175; ventrals 201-220; temporals 1+1

or 1+2..... *P. thomensis.*

II. Scales in 13 rows; ventrals 186-194; subcaudals 143-153;

temporals 1+1 or 1+2..... *P. girardi.*

1. PHILOTHAMNUS SEMIVARIATUS A. Smith, op. cit. pls. lix., lx.; Bouleng. t. c. p. 99.

Tropical and South Africa.

## 2. PHILOTHAMNUS NITIDUS.

*Ahatulla nitida* Günth. Ann. & Mag. N. H. (3) xi. 1863, p. 286.

*Philothamnus nitidus* Bouleng. t. c. p. 100, pl. v. fig. 4.

Lagos to Cameroon.

3. PHILOTHAMNUS DORSALIS Bocage, Journ. Sc. Lisb. i. 1866, p. 69; Bouleng. t. c. p. 101.

Gaboon to Angola.

4. PHILOTHAMNUS THOMENSIS Bocage, Journ. Sc. Lisb. ix. 1882, p. 11, fig.; Bouleng. t. c. p. 101.

S. Thomé Id., Gulf of Guinea.

5. PHILOTHAMNUS GIRARDI Bocage, Journ. Sc. Lisb. (2) iii. 1893, p. 47; Bouleng. t. c. p. 102.

Anno Bom Id., Gulf of Guinea.

14. GASTROPYXIS.

Cope, Proc. Ac. Philad. 1860, p. 556; Bouleng. Cat. Sn. ii. p. 102.

Two species:—

Ventrals 150-174; subcaudals 129-172.....	<i>G. smaragdina.</i>
Ventrals 185-191; subcaudals 170-177.....	<i>G. principis.</i>

1. GASTROPYXIS SMARAGDINA.

*Dendrophis smaragdina* Schleg. Phys. Serp. ii. p. 237.

*Gastropyxis smaragdina* Bouleng. t. c. p. 103.

Tropical Africa, from Sierra Leone and Uganda to the Congo and Northern Angola.

2. GASTROPYXIS PRINCIPIS Bouleng. Ann. Mus. Genova, (3) ii.

1906, p. 213, fig.

Prince's Id., Gulf of Guinea.

15. HAPSIDOPHRYS.

Fischer, Abh. Nat. Ver. Hamb. iii. 1856, p. 110; Bouleng. Cat. Sn. ii. p. 103.

1. HAPSIDOPHRYS LINEATA Fischer, t. c. p. 111, pl. ii. fig. 5; Bouleng. t. c. p. 104.

Gold Coast to Congo, eastwards to Uganda and L. Tanganyika.

16. THRASOPS.

Hallow. Proc. Ac. Philad. 1857, p. 67; Bouleng. Cat. Sn. ii. p. 104.

Two species:—

Rostral little broader than deep; ventrals 179-215; subcaudals 128-146 .....	<i>T. flavigularis.</i>
Rostral much broader than deep; ventrals 163-174; subcaudals 101-114 .....	<i>T. batesii.</i>

1. THRASOPS FLAVIGULARIS.

*Dendrophis flavigularis* Hallow. Proc. Ac. Philad. 1852, p. 205.

*Thrasops flavigularis* Bouleng. t. c. p. 105.

Sierra Leone to Congo.

2. THRASOPS BATESII Bouleng. Ann. & Mag. N. H. (8) ii. 1908,

p. 92.

Cameroon.

17. RHAMNOPHIS.

Günth. Ann. & Mag. N. H. (3) ix. 1862, p. 129; Bouleng. Cat. Sn. iii. p. 632.

Two species:—

Scales smooth; a pair of large shields behind the parietals .....	<i>R. æthiops.</i>
Scales more or less distinctly keeled on the middle of the back; no large occipital shields .....	<i>R. jacksonii.</i>

1. RHAMNOPHIS ÆTHIOPS Günth. l. c. pl. x.; Bouleng. l. c.  
*Thrasops splendens* Anderss. Bih. Sv. Ak. Handl. xxvii. iv.  
 no. 5, 1901, p. 11.

Sierra Leone to Congo, eastwards to the Ituri.

2. RHAMNOPHIS JACKSONII.

- Thrasops jacksonii* Günth. Ann. & Mag. N. H. (6) xv. 1895  
 p. 528.

*Rhamnophis jacksonii* Bouleng. l. c.

French Guinea, Gold Coast, eastwards to Uganda and  
 L. Tanganyika.

18. CORONELLA.

Laur. Syn. Rept. p. 84; Bouleng. Cat. Sn. ii. p. 188.

Two species:—

- Scales in 21 rows; rostral much broader than deep ..... *C. semionata*.  
 Scales in 19 rows; rostral a little broader than deep ..... *C. coronata*.

1. CORONELLA SEMIORNATA Peters, Mon. Berl. Ac. 1854, p. 622;  
 Bouleng. t. c. p. 195.

*Zamenis tchadensis* Chaban. Bull. Mus. Paris, 1917, p. 451,  
 fig.

Soudan, East Africa, N. Rhodesia.

2. CORONELLA CORONATA.

*Calamaria coronata* Schleg. Phys. Serp. ii. p. 46.

*Coronella coronata* Bouleng. t. c. p. 196.

Senegal to Gold Coast.

19. GRAYIA.

Günth. Cat. Col. Sn. p. 50; Bouleng. Cat. Sn. ii. p. 188.

*Synopsis of the Species.*

- I. Scales in 17 or 19 rows; ventrals 143-168.  
 Lower anterior temporal longer than its distance from the loreal;  
 7 upper labials (rarely 8); subcaudals 89-102 ..... *G. smythii*.  
 Lower anterior temporal not longer than its distance from the loreal;  
 8 or 9 upper labials; subcaudals 71-84 ..... *G. ornata*.  
 II. Scales in 15 rows; ventrals 125-149.  
 Eye much shorter than snout; subcaudals 100-128 ..... *G. tholloni*.  
 Eye as long as snout; subcaudals 125-161 ..... *G. cesar*.

1. GRAYIA SMYTHII.

*Coluber smythii* Leach, in Tuckey's Explor. R. Zaire, App.  
 p. 409.

*Grayia smythii*, part., Bouleng. l. c.

Gold Coast to Angola, eastwards to Uganda and L. Tanganyika.

2. GRAYIA ORNATA.

*Macrophis ornatus* Bocage, Journ. Sc. Lisb. i. 1866, p. 67.



*Grayia ornata* Bouleng. P. Z. S. 1909, p. 944, fig.

Cameroon to Angola, eastwards to the Ituri and Lake Tanganyika.

3. *GRAYIA THOLLONI* Mocquard, Bull. Soc. Philom. (8) ix. 1897, p. 11; Bouleng. t. c. p. 951, fig.

French Congo, Katanga, Uganda, Egyptian Soudan.

4. *GRAYIA CÆSAR*.

*Xenurophis cesar* Günth. Ann. & Mag. N. H. (3) xii. 1863, p. 357, pl. vi. fig. C; Bouleng. Cat. Sn. ii. p. 288.

Cameroon to Congo, eastwards to the Ituri.

20. *PROSYMNA*.

Gray, Cat. Sn. p. 80; Bouleng. Cat. Sn. ii. p. 246.

Two species :—

Two internasals, two præfrontals ..... *P. greigerti*.  
 A single internasal, a single præfrontal ..... *P. meleagris*.

1. *PROSYMNA GREIGERTI* Mocquard, Bull. Mus. Paris, 1906, p. 466.

French Soudan.

2. *PROSYMNA MELEAGRIS*.

*Calamaria meleagris* Reinh. Vid. Selsk. Skr. x. 1843, p. 238, pl. i. figs. 4-6.

*Prosymna meleagris* Bouleng. t. c. p. 249.

Sierra Leone to S. Nigeria, eastwards to the Egyptian Soudan.

21. *SCAPHIOPHIS*.

Peters, Mon. Berl. Ac. 1870, p. 644; Bouleng. Cat. Sn. ii. p. 254.

1. *SCAPHIOPHIS ALBOPUNCTATUS* Peters, t. c. p. 645, pl. i. fig. 4; Bouleng. l. c.

Tropical Africa, from the Soudan to the Congo.

22. *PÆCILOPHOLIS*.

Bouleng. Ann. & Mag. N. H. (7) xii. 1903, p. 352.

1. *PÆCILOPHOLIS CAMERONENSIS* Bouleng. l. c.

Cameroon.

23. *DASYPELTIS*.

Wagl. Syst. Amph. p. 178; Bouleng. Cat. Sn. ii. p. 353.

Two species :—

Eye less than  $\frac{1}{2}$  length of head; scales in 23 to 27 rows ..... *D. scabra*.  
 Eye  $\frac{1}{2}$  to  $\frac{3}{4}$  length of head; scales in 20 to 24 rows ..... *D. macrops*.

1. *DASYPELTIS SCABRA.**Coluber scaber* Linn. S. N. i. p. 384.*Dasyveltis scabra* Bouleng. t. c. p. 354.

From Sierra Leone and Egypt to the Cape of Good Hope.

2. *DASYPELTIS MACROPS* Bouleng. Ann. & Mag. N. H. (7) xix. 1907, p. 324.

Cameroon.

B. *Opisthoglypha.*

I. Eye moderate or large; head more or less distinct from neck; loreal present.

A. Pupil vertically elliptic; head short, much broader than neck.

1. Subcaudals in two rows.

Vertebral scales not enlarged; scales in 19 to 23 rows; two superposed anterior temporals.....	<i>Tarbophis.</i>
Vertebral scales not enlarged; scales in 17 or 19 rows; a single anterior temporal.....	<i>Leptodira.</i>
Vertebral scales enlarged; scales in 19 to 25 rows.....	<i>Dipsadomorphus.</i>
2. Subcaudals single; scales in 17 or 19 rows.....	<i>Dipsadoboa.</i>

B. Pupil round, exceptionally vertically subelliptic.

1. Scales not oblique, in 17 or 19 rows; loreal not longer than deep.

Scales keeled; anal entire; a single anterior temporal.....	<i>Geodipsas.</i>
Scales grooved in the adult; anal divided; two loreals; frontal at least twice as long as broad.....	<i>Cælopettis.</i>
Scales smooth; anal divided; frontal about twice as long as broad.....	<i>Rhamphiphis.</i>
2. Scales more or less oblique, in 15 or 17 (rarely 19) rows, smooth; loreal at least $1\frac{1}{2}$ times as long as deep; rostral not or but little broader than deep.	

Frontal, in the middle, not or but slightly narrower than supraocular; a single anterior temporal.....	<i>Dromophis.</i>
Frontal, in the middle, narrower than supraocular; usually two superposed anterior temporals.....	<i>Psammophis.</i>
3. Scales not oblique, in 19 to 25 rows, smooth; loreal at least $1\frac{1}{2}$ times as long as deep; rostral at least twice as broad as deep.....	<i>Macroprotodon.</i>
4. Scales very oblique, very narrow, in 19 or 21 rows, more or less keeled; nostril in an undivided nasal.....	<i>Dispholidus.</i>
C. Pupil horizontal; scales narrow, oblique, feebly keeled, in 19 rows; nostril in an undivided nasal.....	<i>Thelotornis.</i>

II. Eye small or very small; head not at all distinct from neck; no loreal; scales in 15 or 17 rows, not oblique.

A. Subcaudals in two rows.

Nasal in contact with rostral; 5th upper labial in contact with parietal; scales in 17 rows; ventrals 173-208.....	<i>Calamelaps.</i>
First labial in contact with internasal; no labial in contact with parietal; scales in 15 rows; ventrals 180-249.....	<i>Miodon.</i>
First labial in contact with internasal; 5th upper labial in contact with parietal; scales in 15 rows; ventrals 296.....	<i>Elapocalamus.</i>

B. Subcaudals single; one or two upper labials in contact with parietal.

First labial in contact with internasal.....	<i>Polcomon.</i>
Nasal in contact with rostral; posterior maxillary teeth large and strongly grooved.....	<i>Aparallactus.</i>
Nasal in contact with rostral; posterior maxillary teeth feebly enlarged and feebly grooved.....	<i>Elapops.</i>

1. **TARBOPHIS.**

Fleischm. Dalm. nov. Serp. Gen. p. 17; Bouleng. Cat. Sn. iii. p. 47.

Two species:—

Scales in 19 rows; 7 to 9 upper labials ..... *T. variegatus.*  
Scales in 21 or 23 rows; 9 to 11 upper labials ..... *T. obtusus.*

1. **TARBOPHIS VARIEGATUS.**

*Dipsas variegata* Reinh. Vid. Selsk. Skr. x. 1843, p. 249, pl. i. figs. 15-17.

*Tarbophis variegatus* Bouleng. t. c. p. 51.

*Leptodira probeguini* Mocquard, Bull. Mus. Paris, 1902, p. 45.

French Guinea to Cameroon.

2. **TARBOPHIS OBTUSUS.**

*Coluber obtusus* Reuss, Mus. Senckenb. i. 1834, p. 137.

*Tarbophis obtusus* Bouleng. t. c. p. 52.

Mauritania, Northern Nigeria, Egypt to Somaliland.

2. **LEPTODIRA.**

Günth. Cat. Col. Sn. p. 165; Bouleng. Cat. Sn. iii. p. 47.

Two species:—

Ventrals 144-180; anal entire; subcaudals 32-54 ..... *L. hotamboëia.*  
Ventrals 201-225; anal divided; subcaudals 94-121 ..... *L. duchesnii.*

1. **LEPTODIRA HOTAMBOËIA.**

*Coronella hotamboëia* Laur. Syn. Rept. p. 85.

*Leptodira hotamboëia* Bouleng. t. c. p. 89.

Tropical and South Africa.

2. **LEPTODIRA DUCHESNII** Bouleng. Ann. Mus. Congo, Zool. ii. 1901, p. 10, pl. iv. fig. 1.

*Dipsadomorphus viridis* Sternf. Mitt. Zool. Mus. Berl. iii. 1908, p. 411, fig.

*Dipsadomorphus brevirostris* Sternf. l. c.

Cameroon to Congo, eastwards to the Ituri.

3. **DIPSADOMORPHUS.**

Fitzing. in Tschudi, Faun. Per., Herp. p. 55; Bouleng. Cat. Sn. iii. p. 59.

Two species:—

Scales in 19 rows; ventrals 236-276; anal entire; subcaudals 96-132 ..... *D. pulcerulentus.*  
Scales in 21 to 25 rows; ventrals 249-289; anal divided; subcaudals 122-147 ..... *D. blandingii.*

## 1. DIPSADOMORPHUS PULVERULENTUS.

*Dipsas pulverulenta* Fisch. Abh. Nat. Ver. Hamb. iii. 1856, p. 81, pl. iii. fig. 1.

*Dipsadomorphus pulverulentus* Bouleng. t. c. p. 68.

*Dipsadomorphus boueti* Chaban. Bull. Mus. Paris, 1916, p. 314, fig.

Sierra Leone to Congo, eastwards to the Ituri.

## 2. DIPSADOMORPHUS BLANDINGII.

*Dipsas blandingii* Hallow. Proc. Ac. Philad. 1844, p. 170.

*Dipsadomorphus blandingii* Bouleng. t. c. p. 77.

Senegambia to Congo, eastwards to Uganda.

## 4. DIPSADOBOA.

Günth. Cat. Col. Sn. p. 182; Bouleng. Cat. Sn. iii. p. 81.

Two species:—

Scales in 17 rows, vertebrals strongly enlarged ..... *D. unicolor*.  
Scales in 19 rows, vertebrals scarcely enlarged ..... *D. isolepis*.

1. DIPSADOBOA UNICOLOR Günth. op. cit. p. 183; Bouleng. l. c. Sierra Leone to Congo, eastwards to the Ituri.

2. DIPSADOBOA ISOLEPIS Bouleng. Ann. & Mag. N. H. (7) xix. 1907, p. 325.

Cameroon.

## 5. GEODIPSAS.

Bouleng. Cat. Sn. iii. p. 32.

## 1. GEODIPSAS DEPRESSICEPS.

*Tropidonotus depressiceps* Wern. Verh. zool.-bot. Ges. Wien, xlvi. 1897, p. 135.

*Geodipsas mapajensis* Anderss. Bih. Sv. Ak. Handl. xxvii. iv. no. 5, 1901, p. 19.

*Geodipsas depressiceps* Sternf. Mitt. Zool. Mus. Berl. iii. 1908, p. 410.

Cameroon, Fernando Po, Ituri.

## 6. CÆLOPELTIS.

Wagl. Syst. Amph. p. 189; Bouleng. Cat. Sn. iii. p. 141.

## 1. CÆLOPELTIS MONSPESSULANA.

*Coluber monspessulanus* Hermann, Obs. Zool. i. p. 283.

*Celopeltis monspessulanus* Bouleng. l. c.

Borders of the Mediterranean, southwards to Mauritania, eastwards to Persia.

## 7. RHAMPHIOPHIS.

Peters, Mon. Berl. Ac. 1854, p. 624; Bouleng. Cat. Sn. iii. p. 144.

Two species :—

- Snout with angular horizontal edge, curved in profile; 2 or 3  
superposed anterior temporals; subcaudals 90-110 ..... *R. oxyrhynchus*.  
Snout obtusely pointed; 1 or 2 anterior temporals; subcaudals  
64-88 ..... *R. togoensis*.

1. RHAMPHIOPHIS OXYRHYNCHUS.

*Psammophis oxyrhynchus* Reinh. Vid. Selsk. Skr. x. 1843,  
p. 244.

*Rhamphiophis oxyrhynchus* Bouleng. t. c. p. 146.

Tropical Africa, as far north as the Gold Coast.

2. RHAMPHIOPHIS TOGOENSIS.

*Psammophis togoensis* Matschie, Mitth. Deutsch. Schutzgeb.  
vi. 1893, p. 212.

*Rhamphiophis togoensis* Bouleng. t. c. p. 147.

Togoland, N. Nigeria.

8. DROMOPHIS.

Peters, Mon. Berl. Ac. 1869, p. 447; Bouleng. Cat. Sn. iii. p. 149.

Two species :—

- Scales in 17 rows; ventrals 140-159; subcaudals 78-105 ..... *D. lineatus*.  
Scales in 15 rows; ventrals 161-180; subcaudals 110-122 ..... *D. præornatus*.

1. DROMOPHIS LINEATUS.

*Dryophylax lineatus* Dum. & Bibr. Exp. Gén. vii. p. 1124.

*Dromophis lineatus* Bouleng. l. c.

Coast of Guinea to Egyptian Soudan and Zanzibar Coast.

2. DROMOPHIS PRÆORNATUS.

*Dendrophis præornatus* Schleg. Phys. Serp. ii. p. 236.

*Dromophis præornatus* Bouleng. t. c. p. 150.

Gold Coast to Niger.

9. PSAMMOPHIS.

Boie, Isis, 1827, p. 521; Bouleng. Cat. Sn. iii. p. 152.

*Synopsis of the Species.*

- I. Rostral well visible from above; snout  $1\frac{1}{3}$  to 2 times as long as eye; sub-  
caudals 64-149.
- A. Frontal narrower than the supraocular; anal divided.
- Loreal 3 to 4 times as long as deep; usually 9 upper labials, 5th and 6th  
entering the eye ..... *P. schokari*.  
Loreal  $1\frac{2}{3}$  to  $2\frac{1}{2}$  times as long as deep; usually 8 upper labials,  
4th and 5th entering the eye ..... *P. sibilans*.
- B. Frontal as broad as the supraocular; loreal  $2\frac{1}{2}$  times as long as  
deep; 8 upper labials, 4th and 5th entering the eye; anal  
entire ..... *P. regularis*.
- II. Rostral scarcely visible from above; snout 2 to  $2\frac{1}{2}$  times as  
long as eye; loreal 3 to 4 times as long as deep; 9 upper  
labials, 5th and 6th entering the eye; subcaudals 144-172 ... *P. elegans*.

## 1. PSAMMOPHIS SCHOKARI.

*Coluber schokari* Forsk. Descr. Anim. p. 14.

*Psammophis schokari* Bouleng. t. c. p. 157.

North Africa to Mauritania and Somaliland; Arabia and Syria to Afghanistan and Sind.

## 2. PSAMMOPHIS SIBILANS.

*Coluber sibilans* Linn. S. N. i. p. 383.

*Psammophis sibilans* Bouleng. t. c. p. 161.

Tropical and South Africa, Egypt.

3. PSAMMOPHIS REGULARIS Sternf. Mitt. Zool. Mus. Berl. iii. 1908, p. 412.

Cameroon and Togoland.

## 4. PSAMMOPHIS ELEGANS.

*Coluber elegans* Shaw, Zool. iii. p. 536.

*Psammophis elegans* Bouleng. t. c. p. 167.

Mauritania to Niger.

## 10. MACROPROTODON.

Guichen. Explor. Sc. Alg., Rept. p. 22; Bouleng. Cat. Sn. iii. p. 175.

## 1. MACROPROTODON CUCULLATUS.

*Coluber cucullatus* I. Geoffr. Descr. Egypte, Rept. pp. 148, 151, pl. viii. fig. 3.

*Macroprotodon cucullatus* Bouleng. l. c.

Mauritania, North Africa, S. Spain, Baleares, Lampedusa, S. Palestine.

## 11. DISPHOLIDUS.

Duvernoy, Ann. Sc. Nat. xxvi. 1832, p. 150; Bouleng. Cat. Sn. iii. p. 186.

## 1. DISPHOLIDUS TYPUS.

*Bucephalus typus* A. Smith, Zool. Journ. iv. 1829, p. 441.

*Dispholidus typus* Bouleng. t. c. p. 187.

Tropical and South Africa, northwards to Portuguese Guinea and Abyssinia.

## 12. THELOTORNIS.

A. Smith, Ill. Zool. S. Afr., Rept. ; Bouleng. Cat. Sn. iii. p. 184.

## 1. THELOTORNIS KIRTLANDII.

*Leptophis kirtlandii* Hallow. Proc. Ac. Philad. 1844, p. 62.

*Thelotornis kirtlandii* Bouleng. t. c. p. 185.

Tropical and South Africa, northwards to Sierra Leone and Uganda.

13. CALAMELAPS.

Günth. Ann. & Mag. N. H. (3) xviii, 1866, p. 26; Bouleng. Cat. Sn. iii. p. 245.

Two species:—

Scales in 17 rows; 6 upper labials, 3rd and 4th entering the eye ..... *C. unicolor*.  
Scales in 15 rows; 5 upper labials, 2nd and 3rd entering the eye ..... *C. fea*.

1. CALAMELAPS UNICOLOR.

*Calamaria unicolor* Reinh. Vid. Selsk. Skr. x. 1843, p. 236, pl. i. figs. 1-3.

*Calamelaps unicolor* Bouleng. l. c.

Sierra Leone to Niger; East Africa.

2. CALAMELAPS FEÆ Bouleng. Ann. Mus. Genova, (3) ii. 1906, p. 214, fig.

Portuguese Guinea.

14. MIODON.

A. Dum. Arch. Mus. x. 1859, p. 206; Bouleng. Cat. Sn. iii. p. 249.

*Synopsis of the Species.*

- |   |                        |
|---|------------------------|
| I. Anal entire; ventrals 190-216 .....  | <i>M. acanthias</i> .  |
| II. Anal divided.   |                        |
| Internasals considerably shorter than the præfrontals; nasal divided; ventrals 201-228 .....                                  | <i>M. collaris</i> .   |
| Internasals as long as or slightly shorter than the præfrontals; nasal entire or incompletely divided; ventrals 214-249 ..... | <i>M. gabonensis</i> . |
| Internasals as long as or slightly shorter than the præfrontals; nasal divided; ventrals 181-214 .....                        | <i>M. notatus</i> .    |

1. MIODON ACANTHIAS.

*Urobelus acanthias* Reinh. Vid. Meddel. 1860, p. 229, pl. iii.

*Miodon acanthias* Bouleng. t. c. p. 250.

Gold Coast, Ashantee, Nigeria.

2. MIODON COLLARIS.

*Microsoma collare* Peters, Sitzb. Ges. Naturf. Fr. Berl. 1881, p. 148.

*Miodon collaris* Bouleng. t. c. p. 251.

Old Calabar to Angola.

3. MIODON GABONENSIS.

*Elapomorphus gabonensis* A. Dum. Rev. et Mag. Zool. (2) viii. 1856, p. 468.

*Miodon gabonensis* Bouleng. t. c. p. 252.

Old Calabar to Congo, eastwards to the Ituri.



## 4. MIODON NOTATUS.

*Microsoma notatum* Peters, Sitzb. Ges. Nat. Fr. Berl. 1882, p. 127.

*Miodon notatus* Bouleng. t. c. p. 252.

Cameroon, Congo.

## 15. ELAPOCALAMUS.

Bouleng. Ann. & Mag. N. H. (8) viii. 1911, p. 371.

1. ELAPOCALAMUS GRACILIS Bouleng. l. c.

Cameroon.

## 16. POLEMON.

Jan, Rev. et Mag. Zool. (2) x. 1858, p. 520; Bouleng. Cat. Sn. iii. p. 253.

Two species:—

A single postocular; ventrals 221-226..... *P. barthi*.  
Two postoculars; ventrals 174-206..... *P. bocourti*.

1. POLEMON BARTHI Jan, l. c.; Bouleng. t. c. p. 254.

Gold Coast, Ashantee.

2. POLEMON BOCOURTI Mocquard, Bull. Soc. Philom. (8) ix. 1897, p. 13.

*Aparallactus hagmanni* Gough, Zool. Anz. xxv. 1902, p. 646.

Cameroon, French Congo.

## 17. APARALLACTUS.

A. Smith, Ill. Zool. S. Afr., Rept., App. p. 15; Bouleng. Cat. Sn. iii. p. 255.

*Synopsis of the Species.*

I. Two præfrontals; a single labial in contact with the parietal; ventrals 139-156.

A. 6th upper labial in contact with the parietal; 2 postoculars.

Frontal not  $1\frac{1}{2}$  times as long as broad..... *A. dolloi*.

Frontal  $1\frac{1}{2}$  times as long as broad..... *A. batesii*.

B. 5th upper labial in contact with the parietal; a single postocular.

Frontal at least twice as long as broad..... *A. nigrocollaris*.

Frontal hardly  $1\frac{1}{2}$  times as long as broad..... *A. roucheti*.

II. A single præfrontal; 5th and 6th labials in contact with the parietal; ventrals 152-170.

Scales smooth; frontal  $1\frac{1}{2}$  times as long as broad..... *A. lineatus*.

Scales smooth; frontal  $1\frac{2}{3}$  times as long as broad..... *A. anomalus*.

Scales keeled on posterior part of body and on tail; frontal  $1\frac{1}{2}$  times as long as broad..... *A. niger*.

1. APARALLACTUS DOLLOI Werner, Verh. zool.-bot. Ges. Wien, lii. 1902, p. 346.

French Congo.

2. APARALLACTUS BATESII Bouleng. Ann. & Mag. N. H. (7) xix. 1907, p. 325.

Cameroon.

3. *APARALLACTUS NIGROCOLLARIS* Chaban. Bull. Mus. Paris, 1916, p. 377, fig.  
French Congo.
4. *APARALLACTUS ROUCHETI*.  
*Aparallactus nigrocollaris*, var. *roucheti* Chaban, t. c. p. 378, fig.  
French Congo.
5. *APARALLACTUS LINEATUS*.  
*Uriechis lineatus* Peters, Mon. Berl. Ac. 1870, p. 643, pl. i. fig. 3.  
*Aparallactus lineatus* Bouleng. Cat. Sn. iii. p. 261.  
Keta, Guinea.
6. *APARALLACTUS ANOMALUS*.  
*Uriechis anomala* Bouleng. Ann. & Mag. N. H. (6) xii. 1893,  
p. 273.  
*Aparallactus anomalus* Bouleng. Cat. Sn. iii. p. 262, pl. xi. fig. 3.  
Gold Coast.
7. *APARALLACTUS NIGER* Bouleng. Ann. & Mag. N. H. (6) xix.  
1897, p. 154.  
*Rouleophis chevalieri* Chaban. Bull. Mus. Paris, 1916, p. 379, fig.  
Sierra Leone, French Guinea.

18. ELAPOPS.

Günth. Ann. & Mag. N. H. (3) iv. 1859, p. 161; Bouleng. Cat. Sn. iii. p. 262.

1. *ELAPOPS MODESTUS* Günth. l. c.; Bouleng. l. c.  
*Aparallactus bouleengeri* Werner, Verh. zool.-bot. Ges. Wien, xlv. 1896, p. 363.  
*Aparallactus peraffinis* Werner, op. cit. xlvii. 1897, p. 404.  
Liberia to Congo, eastwards to the Ituri.

C. *Proteroglypha*.

(Loreal absent in all the genera.)

- I. Head short; subcaudals less than 95.  
Scales not at all oblique; ventrals 192-230; subcaudals 67-80..... *Bouleengerina*.  
Scales more or less oblique; ventrals 141-172; subcaudals 13-36... *Elapechis*.  
Scales oblique; ventrals 189-228; subcaudals 50-92 ..... *Naiia*.
- II. Head long, narrow, snout not broader than long; scales very oblique; ventrals 202-279; subcaudals 97-121 ..... *Dendraspis*.

1. *BOULENGERINA*.

Dollo, Bull. Mus. Belg. iv. 1886, p. 159; Bouleng. Cat. Sn. iii. p. 357.

Two species:—

- Rostral nearly as deep as broad; temporals 1+2; 3 upper labials in contact with lower subocular..... *B. annulata*.  
Rostral much broader than deep; temporals 2+2 or 2+3; 2 upper labials in contact with lower subocular ..... *B. dybowskii*.

## 1. BOULENGERINA ANNULATA.

*Naia annulata* Buchh. & Peters, Mon. Berl. Ac. 1876, p. 119.  
*Boulengerina annulata* Bouleng. P. Z. S. 1900, p. 455, pl. xxxii.  
 Cameroon to Congo, eastwards to the Uellé and the Stanley Falls.

2. BOULENGERINA DYBOWSKII Mocquard, Bull. Soc. Philom. (8) ix. 1897, p. 15.

French Congo.

## 2. ELAPECHIS.

Bouleng. Cat. Sn. iii. p. 358.

## 1. ELAPECHIS GUENTHERI.

*Elapsoidea guentheri* Bocage, Journ. Sc. Lisb. i. 1866, p. 70, pl. i. fig. 3.

*Elapechis guentheri* Bouleng. t. c. p. 359.

*Elapechis moebiusi* Werner, Verh., zool.-bot. Ges. Wien, xlvii. 1897, p. 400.

Togoland, Northern Nigeria, and Uganda to Angola and Nyassaland.

## 3. NAIA.

Laur. Syn. Rept. p. 90; Bouleng. Cat. Sn. iii. p. 372.

*Synopsis of the Species.*

I. 19 to 29 scales across the neck, which is dilatable, 17 to 23 across the body; 53-70 subcaudals.

6th or 7th upper labial largest and deepest, in contact with postoculars; eye separated from the labials by suboculars .....	<i>N. haie</i> .
6th upper labial largest and deepest, in contact with postoculars; 3rd and 4th upper labials entering the eye .....	<i>N. melanoleuca</i> .
3rd or 3rd and 4th upper labials deepest and entering the eye, 6th and 7th not in contact with postoculars .....	<i>N. nigricollis</i> .

II. 15 scales across the neck, which is not dilatable, 13 or 15 across the body; 4th or 3rd and 4th upper labials entering the eye; 87-92 subcaudals .....

*N. goldii*.

## 1. NAIA HAIE.

*Coleuber haie* Linn. in Hasselq. Reise Palæst. p. 366.

*Naia haie* Bouleng. t. c. p. 374.

Borders of the Sahara, East Africa southwards to the Transvaal and Zululand, Palestine, Arabia.

## 2. NAIA MELANOLEUCA.

*Naia haie*, var. *melanoleuca* Hallow. Proc. Ac. Philad. 1857, pp. 61, 72.

*Naia melanoleuca* Bouleng. t. c. p. 376.

Tropical Africa, from the Gold Coast and Uganda to Angola and Nyassaland.

3. NAIA NIGRICOLLIS Reinh. Vidensk. Selsk. Skr. x. 1843, p. 269, pl. iii. figs. 5-7; Bouleng. t. c. p. 378.

Senegambia and Upper Egypt to Bechuanaland and Natal.

4. NAIÀ GOLDII Bouleng. Ann. & Mag. N. H. (6) xvi. 1895, p. 34, and Cat. t. c. p. 387, pl. xx. fig. 2.

*Naia guentheri* Bouleng. Cat. t. c. p. 388, pl. xxi.

Sierra Leone to Congo, eastwards to the Ituri and the Kasai.

4. DENDRASPIS.

Schleg. Versl. Zool. Gen. Amsterd. 1848; Bouleng. Cat. Sn. iii. p. 434.

Two species:—

Scales in 15 to 19 rows, outer not shorter than dorsals ..... *D. jamesonii*.  
 Scales in 13 rows, outer half as long as dorsals ..... *D. angusticeps*.

1. DENDRASPIS JAMESONII.

*Elaps jamesonii* Traill, in Schleg. Phys. Serp., Engl. Transl. p. 179, pl. ii. figs. 19, 20.

*Dendraspis jamesonii* Bouleng. t. c. p. 436.

Tropical Africa, from Nigeria and Uganda to the Congo and Angola.

2. DENDRASPIS VIRIDIS.

*Leptophis viridis* Hallow. Proc. Ac. Philad. 1844, p. 172.

*Dendraspis viridis* Bouleng. t. c. p. 435.

Senegal to Niger and S. Thomé Id., Gulf of Guinea.

Family VIPERIDÆ.

I. Eye moderate or large, usually separated from the upper labials by suboculars.

A. Upper surface of head with large symmetrical shields; pupil round ..... *Causus*.

B. Upper surface of head with scales; pupil vertical.

1. Subcaudals in two rows.

Lateral scales not smaller than dorsals, without serrated keels ..... *Bitis*.

Lateral scales smaller than dorsals, disposed obliquely, with serrated keels ..... *Cerastes*.

2. Subcaudals single; lateral scales smaller than dorsals and oblique or irregular.

Lateral scales with serrated keels ..... *Echis*.

Lateral scales without serrated keels; tail prehensile ..... *Atheris*.

II. Eye minute, with round pupil; upper surface of head with large symmetrical shields; no loreal; a small præocular usually present ..... *Atractaspis*.

1. CAUSUS.

Wagl. Syst. Amph. p. 172; Bouleng. Cat. Sn. iii. p. 465.

Two species:—

Scales in 15 to 21 rows; subcaudals in two rows ..... *C. rhombeatus*.  
 Scales in 13 rows; subcaudals single ..... *C. lichtensteini*.

1. CAUSUS RHOMBEATUS.

*Sepedon rhombeatus* Licht. Verz. Doubl. Mus. Berl. p. 106.

*Causus rhombeatus* Bouleng. t. c. p. 467.

Tropical and South Africa.

## 2. CAUSUS LICHTENSTEINII.

*Aspidelaps lichtensteinii* Jan, Rev. et Mag. Zool. 1859, p. 511.

*Causus lichtensteinii* Bouleng. t. c. p. 470.

From the Gold Coast and Uganda to the Congo.

## 2. BITIS.

Gray, Zool. Miscell. p. 69; Bouleng. Cat. Sn. iii. p. 492.

*Synopsis of the Species.*

One or two series of scales between the nasal and the rostral; 8 to 11 scales across the head, from eye to eye.....	<i>B. arietans.</i>
4 or 5 series of scales between the nasal and the rostral; 13 to 16 scales across the head, from eye to eye; a single enlarged, sometimes horn-like scale above the internasal, in contact with its fellow .....	<i>B. gabonica.</i>
4 to 6 series of scales between the nasal and the rostral; 14 to 16 scales across the head, from eye to eye; 2 or 3 enlarged, horn-like scales above the internasal, usually with small scales between them.....	<i>B. nasicornis.</i>

## 1. BITIS ARIETANS.

*Vipera arietans* Merr. Tent. p. 152.

*Bitis arietans* Bouleng. t. c. p. 493.

Tropical and South Africa, northwards to S. Morocco; Southern Arabia.

## 2. BITIS GABONICA.

*Echidna gabonica* Dum. & Bibr. Erp. Gén. vii. p. 1428, pl. lxxx. b.

*Bitis gabonica* Bouleng. t. c. p. 499.

Tropical Africa.

## 3. BITIS NASICORNIS.

*Coluber nasicornis* Shaw, Nat. Miscell. iii. pl. xciv.

*Bitis nasicornis* Bouleng. t. c. p. 500.

Tropical Africa.

## 3. CERASTES.

Wagl. Syst. Amph. p. 178; Bouleng. Cat. Sn. iii. p. 501.

1. CERASTES CORNUTUS Forsk. Descr. Anim. p. ix; Bouleng. t. c. p. 502.

Borders of the Sahara and Soudan; Arabia and Palestine.

## 4. ECHIS.

Merr. Tent. p. 149; Bouleng. Cat. Sn. iii. p. 504.

## 1. ECHIS CARINATUS.

*Pseudoboa carinata* Schneid. Hist. Amph. ii. p. 285.

*Echis carinatus* Bouleng. t. c. p. 505.

Desert and sandy districts of Africa north of the Equator; Southern Asia from Transcaspia and Arabia to India.

5. ATHERIS.

Cope, Proc. Ac. Philad. 1862, p. 337; Bouleng. Cat. Sn. iii. p. 508.

*Synopsis of the Species.*

9-11 scales across head, from eye to eye, 15-17 round eye; 25-36 scales across body .....	<i>A. chlorechis.</i>
7-9 scales across head, from eye to eye, 10-16 round eye; 15-25 scales across body .....	<i>A. squamiger.</i>
8-10 scales across head, from eye to eye, 16-17 round eye; 25 scales across body; several erect, horn-like superciliary scales.	<i>A. ceratophorus.</i>

1. ATHERIS CHLORECHIS.

*Vipera chlorechis* Schleg. Versl. Ak. Amsterd. iii. 1855, p. 317.

*Atheris chlorechis* Bouleng. l. c.

Liberia to Gaboon.

2. ATHERIS SQUAMIGER.

*Echis squamigera* Hallow. Proc. Ac. Philad. 1854, p. 193.

*Atheris squamiger* Bouleng. t. c. p. 509.

Calabar to Angola, eastwards to Uganda and the Ituri.

3. ATHERIS CERATOPHORUS Werner, Verh. zool.-bot. Ges. Wien,

xlv. 1895, p. 194, pl. v. fig. 1; Bouleng. t. c. p. 510.

Togoland, East Africa.

6. ATRACTASPIS.

A. Smith, Ill. Zool. S. Afr., Rept.; Bouleng. Cat. Sn. iii. p. 519.

*Synopsis of the Species.*

I. Anal divided; all or most of the subcaudals paired.	
2nd lower labial separated from its fellow by the chin-shields; scales in 23-27 rows; ventrals 217-257 .....	<i>A. irregularis.</i>
2nd lower labial forming a suture with its fellow; scales in 19-21 rows; ventrals 308-331 .....	<i>A. reticulata.</i>
2nd lower labial forming a suture with its fellow; scales in 21-23 rows; ventrals 336-359 .....	<i>A. heterochilus.</i>
II. Anal entire; all or most of the subcaudals paired.	
Scales in 21 rows; ventrals 198-222 .....	<i>A. matschiensis.</i>
Scales in 29 rows; ventrals 226 .....	<i>A. caudalis.</i>
III. Anal entire; all or most of the subcaudals single.	
A. Postocular in contact with a large temporal.	
1. Snout rounded, feebly projecting.	
2nd lower labial very large, forming a suture with its fellow; scales in 23-27 rows; ventrals 178-193 .....	<i>A. corpulenta.</i>
3rd lower labial longest; scales in 21 rows; ventrals 195 .....	<i>A. boulengeri.</i>
3rd lower labial longest; scales in 19-21 rows; ventrals 251-300 .....	<i>A. aterrima.</i>
2. Snout cuneiform; scales in 31 rows; ventrals 240 .....	<i>A. dahomeyensis.</i>
B. Temporals small, 2 or 3 superposed in front.	
Snout cuneiform; upper part of rostral as long as its distance from the frontal; scales in 25 rows; ventrals 210-223 .....	<i>A. micropholis.</i>
Snout rounded, upper part of rostral much shorter than its distance from the frontal; scales in 25-29 rows; ventrals 214-225 .....	<i>A. watsonii.</i>

1. *ATRACTASPIS IRREGULARIS*.

*Elaps irregularis* Reinh. Vid. Selsk. Skr. x. 1843, p. 264, pl. iii. figs. 1-3.

*Atractaspis irregularis* Bouleng. t. c. p. 513.

West and Central Africa, from the Gold Coast and Uganda to the Congo.

2. *ATRACTASPIS RETICULATA* Sjöstedt, Zool. Anz. 1896, p. 516. Cameroon.

3. *ATRACTASPIS HETEROCHILUS* Bouleng. Ann. Mus. Congo, Zool. iii. p. 13, pl. v. fig. 1.

Cameroon, Ituri, Tanganyika.

4. *ATRACTASPIS MATSCHIENSIS* Werner, Verh. zool.-bot. Ges. Wien, xlvii. 1897, p. 404.

Cameroon.

5. *ATRACTASPIS CAUDALIS* Sternf. Sitzb. Ges. Nat. Fr. Berl. 1908, p. 94.

Gold Coast.

6. *ATRACTASPIS CORPULENTA*.

*Brachycranium corpulentum* Hallow. Proc. Ac. Philad. 1854, p. 99.

*Atractaspis corpulenta* Bouleng. Cat. Sn. iii. p. 514.

Liberia to Congo, eastwards to the Ituri.

7. *ATRACTASPIS BOULENGERI* Mocquard, Bull. Soc. Philom. (8) ix. 1897, p. 16.

Ogowe.

8. *ATRACTASPIS ATERRIMA* Günth. Ann. & Mag. N. H. (3) xii. 1863, p. 363; Bouleng. t. c. p. 515.

Gold Coast to Niger, eastwards to Uganda.

9. *ATRACTASPIS DAHOMEYENSIS* Bocage, Journ. Sc. Lisb. xi. 1887, p. 196; Bouleng. t. c. p. 516.

Dahomey.

10. *ATRACTASPIS MICROPHOLIS* Günth. Ann. & Mag. N. H. (4) ix. 1872, p. 36, pl. iii. fig. E; Bouleng. t. c. p. 516.

Senegambia, Northern Nigeria.

11. *ATRACTASPIS WATSONII* Bouleng, Ann. & Mag. N. H. (8) ii. 1908, p. 93.

*Atractaspis nigra* Pellegr. Bull. Mus. Paris, 1909, p. 414.

Mauritania, French Soudan, Northern Nigeria.



## 17. A List of the Snakes of North Africa.

By G. A. BOULENGER, F.R.S., F.Z.S.

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This list, dealing with the comparatively few species known from North Africa (Section VII. of map on p. 269), concludes the series I have prepared for the easy identification of the Snakes of Africa\*.

Only four families are represented in this area:—

Worm-like, covered with uniform scales above and beneath; mouth small, inferior; eyes rudimentary, under the head-shields.....	GLAUCONIIDÆ.
Mouth large; eyes exposed; head covered with small scales; ventral shields much narrower than the body.....	BOIDÆ.
Mouth large; eyes exposed; head with large shields; ventral shields broad.....	COLUBRIDÆ.
Mouth large; eyes exposed; head covered with small scales; ventral shields broad.....	VIPERIDÆ.

## Family GLAUCONIIDÆ.

A single genus.

## 1. GLAUCONIA.

Gray, Cat. Liz. p. 139; Bouleng. Cat. Sn. i. p. 59.

Two species:—

Snout hooked, the preoral portion flat or concave inferiorly; diameter of body at least 100 times in total length.....	<i>G. macrorhynchus</i> .
Snout rounded; diameter of body less than 100 times in total length.....	<i>G. cairi</i> .

## 1. GLAUCONIA MACRORHYNCHUS.

*Stenostoma macrorhynchus* Jan, Arch. Zool. Anat. Phys. i. 1862, p. 190.

*Glauconia macrorhynchus* Bouleng. Cat. Sn. i. p. 61.

*Glauconia algeriensis* Jacquet, Bibl. Anat. iv. 1896, p. 79, figs.

Algeria, Nubia, Mesopotamia, Persia.

## 2. GLAUCONIA CAIRI.

*Stenostoma cairi* Dum. & Bibr. Erp. Gén. vi. p. 323.

*Glauconia cairi* Bouleng. Cat. Sn. i. p. 66.

Egypt, Nubia, Abyssinia, Somaliland, Mauritania.

## Family BOIDÆ.

A single genus.

## 1. ERVX.

Daud. Hist. Rept. vii. p. 251; Bouleng. Cat. Sn. i. p. 122.

\* P. Z. S. 1915, pp. 193, 369, 611, 641, and 1919, p. 267.—According to my latest estimate, the number of African species of Snakes amounts to 475.

Two species :—

- 12 to 15 scales from eye to eye across forehead ; tail pointed, ending  
in a conical scute ..... *E. thebaicus.*  
5 to 7 scales from eye to eye across forehead ; tail obtuse ..... *E. jaculus.*

1. *ERYX THEBAICUS* Reuss, Mus Senckenb. i. 1834, p. 134 ;  
Bouleng. Cat. Sn. i. p. 125.

Upper Egypt to East Africa.

2. *ERYX JACULUS.*

*Anguis jaculus* Linn. S. N. i. p. 391.

*Eryx jaculus* Bouleng. Cat. Sn. i. p. 124.

Algeria, Egypt, Syria, Asia Minor, Greece.

### Family COLUBRIDÆ.

Three parallel series :—

- No poison-fangs ; all the teeth solid ..... A. Aglypha.  
Poison-fangs behind ..... B. Opisthoglypha.  
Poison-fangs in front ..... C. Proteroglypha.

#### A. Aglypha.

I. Loreal present ; scales in 19 rows or more.

A. Scales strongly keeled, in 19 to 23 rows ; pupil round ; a  
single anterior temporal ..... *Tropidonotus.*

B. Scales smooth or feebly keeled ; 2 to 4 superposed anterior temporals ; rostral  
not twice as broad as deep.

Head elongate ; snout rounded at the end ; pupil round ; one or  
more suboculars ; ventrals 195-278 ; subcaudals 65-154 ..... *Zamenis.*

Snout cuneiform, rostral four-sided ; pupil vertically elliptic or  
subelliptic ; ventrals 160-188 ; subcaudals 35-46 ..... *Lytorhynchus.*

Snout rounded or obtusely pointed ; pupil round ; no suboculars ;  
ventrals 170-200 ; subcaudals 49-72 ..... *Coronella.*

II. Loreal present or absent ; scales in 15 rows, smooth ; snout  
strongly projecting ..... *Oligodon.*

III. Loreal absent ; pupil vertical ; scales in 23 to 27 rows,  
strongly keeled ..... *Dasypeltis.*

#### 1. TROPIDONOTUS.

Kuhl, Bull. Sc. Nat. ii. 1824, p. 81 ; Bouleng. Cat. Sn. i.  
p. 192.

#### *Synopsis of the Species.*

Scales in 19 rows ; third and fourth upper labials entering the eye ;  
upper postocular not in contact with the temporal ..... *T. natrix.*

Scales in 19 rows ; fourth or fourth and fifth upper labials entering  
the eye ; upper postocular not in contact with the temporal ... *T. tessellatus.*

Scales in 21 or 23 rows ; third and fourth upper labials entering  
the eye ; upper postocular in contact with the temporal ..... *T. viperinus.*

1. *TROPIDONOTUS NATRIX.*

*Coluber natrix* Linn. S. N. i. p. 380.

*Tropidonotus natrix* Bouleng. t. c. p. 219.

Algeria and Tunisia north of the Atlas, Europe, Western Asia.

2. TROPIDONOTUS TESSELLATUS.

*Coronella tessellata* Laur. Syn. Rept. p. 87.

*Tropidonotus tessellatus* Bouleng. t. c. p. 233.

N.E. Egypt, Europe, Western Asia.

3. TROPIDONOTUS VIPERINUS.

*Coluber viperinus* Latr. Hist. Rept. iv. p. 49.

*Tropidonotus viperinus* Bouleng. t. c. p. 235.

Morocco, Algeria, Tunisia, Spanish Peninsula, France, Switzerland, Italy.

2. ZAMENIS.

Wagl. Syst. Amph. p. 188; Bouleng. Cat. Sn. i. p. 379.

*Synopsis of the Species.*

I. A pair of internasals and a pair of præfrontals.

A. Scales in 19 rows; two labials entering the eye.

- |   |                         |
|---|-------------------------|
| Frontal anteriorly not or but little broader than the supraocular;<br>ventrals 205-218; subcaudals 98-132 ..... | <i>Z. dahlii.</i>       |
| Frontal anteriorly considerably broader than the supraocular;<br>ventrals 212-262; subcaudals 113-154 .....     | <i>Z. rhodorhachis.</i> |
| Frontal anteriorly considerably broader than the supraocular;<br>ventrals 195-201; subcaudals 95-105 .....      | <i>Z. rogersi.</i>      |

B. Scales in 21 (rarely 23) rows, smooth; two labials entering the eye; ventrals 198-238; subcaudals 79-111 .....

*Z. florulentus.*

C. Scales in 23 or 25 rows, obtusely or faintly keeled; usually a single labial entering the eye; ventrals 197-216; subcaudals 70-101 .....

*Z. nummifer.*

D. Scales in 25 to 29 (rarely 23) rows, smooth.

- |  |                        |
|--|------------------------|
| Scales usually in 25 rows; usually one labial entering the eye;<br>ventrals 214-232; subcaudals 87-104 .....                         | <i>Z. algirus.</i>     |
| Scales in 25 to 29 rows; eye usually separated from the labials by a series of suboculars; ventrals 222-258; subcaudals 77-107 ..... | <i>Z. hippocrepis.</i> |

II. Præfrontals broken up into 3 or more shields; eye separated from the labials by suboculars; scales in 25 to 31 rows, usually more or less obtusely keeled; ventrals 210-278; subcaudals 65-110 .....

*Z. diadema.*

1. ZAMENIS DAHLII.

*Tyria dahlii* Fitzing. N. Class. Rept. p. 60.

*Zamenis dahlii* Bouleng. t. c. p. 397.

N. Egypt, S.W. Asia, S.E. Europe.

2. ZAMENIS RHODORHACHIS Jan, in De Filippi, Viagg. Pers.

p. 356; Bouleng. t. c. p. 398.

Egypt to Somaliland, S.W. Asia.

3. ZAMENIS ROGERSI Anders. Ann. & Mag. N. H. (6) xii. 1893, p. 439; Bouleng. Cat. Sn. iii. p. 623.

N. Egypt.

4. ZAMENIS FLORULENTUS.

*Coluber florulentus* Geoffr. Descr. Egypte, Rept. p. 146, pl. viii. fig. 2.

*Zamenis florulentus* Bouleng. Cat. Sn. i. p. 402.

Egypt to Somaliland.

5. ZAMENIS NUMMIFER.

*Coluber nummifer* Reuss, Mus. Senckenb. i. p. 135.

*Zamenis nummifer* Bouleng. t. c. p. 407.

N. Egypt, Syria, Cyprus, Asia Minor.

6. ZAMENIS ALGIRUS.

*Periops algira* Jan, Elenco, p. 60.

*Zamenis algirus* Bouleng. t. c. p. 408.

Algeria and Tunisia.

7. ZAMENIS HIPPOCREPIS.

*Coluber hippocrepis* Linn. S. N. i. p. 388.

*Zamenis hippocrepis* Bouleng. t. c. p. 409.

Morocco, Algeria, Tunisia, Spain and Portugal, Sardinia.

8. ZAMENIS DIADEMA.

*Coluber diadema* Schleg. Phys. Serp. ii. p. 148.

*Zamenis diadema* Bouleng. t. c. p. 411.

Algeria, Tunisia, Tripoli, Egypt, Arabia to Turkestan and N.W. India.

3. LYTORHYNCHUS.

Peters, Mon. Berl. Ac. 1862, p. 272; Bouleng. Cat. Sn. i. p. 414.

1. LYTORHYNCHUS DIADEMA.

*Heterodon diadema* Dum. & Bibr. Erp. Gén. vii. p. 779.

*Lytorhynchus diadema* Bouleng. t. c. p. 415.

Algerian and Tunisian Sahara, Tripoli, Egypt, Nubia, Arabia, Syria, Mesopotamia, Persia.

4. CORONELLA.

Laur. Syn. Rept. p. 84; Bouleng. Cat. Sn. ii. p. 188.

Two species:—

Rostral as deep as broad, produced between the internasals ..... *C. analie*.  
 Rostral much broader than deep, just visible from above ..... *C. giron dica*.

1. CORONELLA AMALIÆ.

*Rhinechis amalice* Boettg. Zool. Anz. 1881, p. 570.

*Coronella amalice* Bouleng. t. c. p. 193.

Morocco and Algeria.

2. CORONELLA GIRONDICA.

*Coluber girondicus* Daud. Hist. Rept. vi. p. 432.

*Coronella girondica* Bouleng. t. c. p. 194.

Morocco and Algeria, Spain and Portugal, S. France, Italy.

5. OLIGODON.

Boie, Isis, 1827, p. 519; Bouleng. Cat. Sn. ii. p. 233.

1. OLIGODON MELANOCEPHALUS.

*Homalosoma melanocephalum* Jan, Arch. Zool. Anat. Phys. ii. 1862, p. 34.

*Oligodon melanocephalus* Bouleng. t. c. p. 246.

N. Egypt, Sinai, Syria.

6. DASYPELTIS.

Wagl. Syst. Amph. p. 178; Bouleng. Cat. Sn. ii. p. 353.

1. DASYPELTIS SCABRA.

*Coluber scaber* Linn. Mus. Ad. Frid. p. 36, pl. x. fig. 1.

*Dasyzeltis scabra* Bouleng. t. c. p. 354.

Egypt, Tropical and South Africa, S. Arabia.

B. *Opisthoglypha*.

I. Head short, very distinct from neck; pupil vertically elliptic; scales in 19 to 23 rows; subcaudals 60-86.

Eye moderate; anal divided ..... *Tarbophis*.  
 Eye large; anal entire ..... *Leptodira*.

II. Head elongate; eye large, with round pupil; scales in 17 or 19 rows.

Scales not oblique; loreal not longer than deep; subcaudals 48-102 ..... *Cœlopeltis*.

Scales more or less oblique; loreal at least  $1\frac{2}{3}$  times as long as deep; subcaudals 90-149 ..... *Psammophis*.

III. Head short, not very distinct from neck; eye rather small, with round or vertically subelliptic pupil; rostral at least twice as broad as deep; scales in 19 to 25 rows; subcaudals 40-54 .....

*Macroprotodon*.

1. TARBOPHIS.

Fleischm. Dalm. nov. Serp. Gen. p. 17; Bouleng. Cat. Sn. iii. p. 47.

Two species :—

Scales in 19 rows; ventrals 174-190 .....	<i>T. savignyi.</i>
Scales in 23 (rarely 21) rows; ventrals 213-272 .....	<i>T. obtusus.</i>

1. *TARBOPHIS SAVIGNYI* Bouleng. t. c. p. 48.

N. Egypt, Syria.

2. *TARBOPHIS OBTUSUS.*

*Coluber obtusus* Reuss, Mus. Senckenb. i. 1834, p. 137.

*Tarbohis obtusus* Bouleng. t. c. p. 52.

Egypt to Somaliland, Mauritania and N. Nigeria.

## 2. LEPTODIRA.

Günth. Cat. Col. Sn. p. 165; Bouleng. Cat. Sn. iii. p. 88.

1. *LEPTODIRA TRIPOLITANA* Werner, Zool. Jahrb., Syst. xxvii. 1909, p. 619.

Tripoli.

## 3. CÆLOPELTIS.

Wagl. Syst. Amph. p. 189; Bouleng. Cat. Sn. iii. p. 141.

Two species :—

Two loreals; frontal very narrow in the middle; subcaudals 68-102 .....	<i>C. monspessulana.</i>
A single loreal; frontal as broad as the supraocular; subcaudals 48-73 .....	<i>C. moilensis.</i>

1. *CÆLOPELTIS MONSPESSULANA.*

*Coluber monspessulanus* Herm. Obs. Zool. i. p. 283.

*Cælopehtis monspessulana* Bouleng. l. c.

Borders of the Mediterranean, southwards to Mauritania, eastwards to Persia.

2. *CÆLOPELTIS MOILENSIS.*

*Coluber moilensis* Reuss, Mus. Senckenb. i. 1834, p. 142, pl. vii. fig. 1.

*Cælopehtis moilensis* Bouleng. t. c. p. 143.

Northern Sahara, from Algeria to Egypt, Nubia, Arabia, Western Persia.

## 4. PSAMMOPHIS.

Boie, Isis, 1827, p. 521; Bouleng. Cat. Sn. iii. p. 152.

Two species :—

Loreal 3 to 4 times as long as deep; usually 9 upper labials, 5th and 6th entering the eye .....	<i>P. schokari.</i>
Loreal $1\frac{3}{4}$ to $2\frac{1}{2}$ times as long as deep; usually 8 upper labials, 4th and 5th entering the eye .....	<i>P. sibilans.</i>

1. PSAMMOPHIS SCHOKARI.

*Coluber schokari* Forsk. Descr. Anim. p. 14.

*Psammophis schokari* Bouleng. t. c. p. 157.

North Africa to Mauritania and Somaliland; Arabia and Syria to Afghanistan and Sind.

2. PSAMMOPHIS SIBILANS.

*Coluber sibilans* Linn. S. N. i. p. 383.

*Psammophis sibilans* Bouleng. t. c. p. 161.

Egypt, Tropical and South Africa.

5. MACROPROTODON.

Guichen. Expl. Sc. Alg., Rept. p. 22; Bouleng. Cat. Sn. iii. p. 175.

1. MACROPROTODON CUCULLATUS.

*Coluber cucullatus* I. Geoffr. Descr. Egypte, Rept. pp. 148, 151, pl. viii. fig. 3.

*Macroprotodon cucullatus* Bouleng. l. c.

North Africa from Morocco to N. Egypt, Mauritania, S. Spain, Baleares, Lampedusa, S. Palestine.

C. Proteroglypha.

Two genera :—

Scales oblique; neck dilatable; subcaudals 53-68 ..... *Naia*.  
 Scales not oblique; subcaudals 45-48 ..... *Walterinnesia*.

1. NAIA.

Laur. Syn. Rept. p. 90; Bouleng. Cat. Sn. iii. p. 372.

Two species :—

6th or 7th upper labial largest and deepest, in contact with post-oculars; eye separated from the labials by suboculars; 21-23 scales across neck, 19-21 across middle of body ..... *N. haie*.  
 3rd upper labial deepest and entering the eye, 6th and 7th not in contact with postoculars; 25-29 scales across neck, 21-25 across middle of body ..... *N. nigricollis*.

1. NAIA HAIE.

*Coluber haie* Linn. in Hasselq. Reise Palest. p. 366.

*Naia haie* Bouleng. t. c. p. 374.

Borders of the Sahara, East Africa southwards to the Transvaal and Zululand, Palestine, Arabia.

2. NAIA NIGRICOLLIS Reinh. Vid. Selsk. Skr. x. 1843, p. 269, pl. iii. figs. 5-7; Bouleng. t. c. p. 378.

Upper Egypt and Senegambia to Bechuanaland and Natal.

## 2. WALTERINNESIA.

Lataste, *Le Natural*. 1887, p. 411; *Bouleng. Cat. Sn.* iii. p. 392.

1. WALTERINNESIA ÆGYPTIA Lataste, l. c.; *Bouleng. l. c.*  
Egypt?, Nubia?

## Family VIPERIDÆ.

I. Lateral scales not smaller than dorsals, without serrated keels.

Nasal in contact with rostral or separated from it by a naso-rostral shield; scales in 19 to 27 rows ..... *Vipera*.  
Nasal separated from rostral by small scales; scales in 29 to 41 rows... *Bitis*.

II. Lateral scales smaller than dorsals, disposed obliquely, with serrated keels.

Ventrals angulate laterally; subcaudals in two rows ..... *Cerastes*.  
Ventrals rounded; subcaudals single ..... *Echis*.

## 1. VIPERA.

*Laur. Syn. Rept.* p. 99; *Bouleng. Cat. Sn.* iii. p. 471.

Two species:—

Snout turned up at the end, produced into a small scaly appendage;  
scales in 21 rows ..... *V. latastii*.  
Snout rounded; scales in 25 or 27 rows ..... *V. lebetina*.

1. VIPERA LATASTII Boscá, *Bull. Soc. Zool. France*, 1878, p. 116, pl. iv.; *Bouleng. t. c.* p. 484.

Morocco and Algeria north of the Atlas, Spain and Portugal.

## 2. VIPERA LEBETINA.

*Coluber lebetinus* Linn. *S. N. i.* p. 378.

*Vipera lebetina* *Bouleng. t. c.* p. 487.

Morocco, Algeria, Tunisia, S.W. Asia, Greek Archipelago.

## 2. BITIS.

*Gray, Zool. Miscell.* p. 69; *Bouleng. Cat. Sn.* iii. p. 492.

## 1. BITIS ARIETANS.

Morocco (Valley of Sous), Tropical and South Africa, S. Arabia.

## 3. CERASTES.

*Wagl. Syst. Amph.* p. 178; *Bouleng. Cat. Sn.* iii. p. 501.

Two species:—

15 to 21 scales across the head, from eye to eye, 14 to 18 round the eye; frequently an erect horn-like scale above the eye; scales in 27-35 rows; ventrals 130-165..... *C. cornutus*.  
9 to 13 scales across the head, from eye to eye, 9 to 14 round the eye; scales in 23-27 rows; ventrals 102-122..... *C. vipera*.



1. CERASTES CORNUTUS Forsk. Descr. Anim. p. ix; Bouleng. t. c. p. 502.

Borders of the Sahara and Soudan, Arabia and Palestine.

2. CERASTES VIPERA.

*Colubra vipera* Linn. in Hasselq. Reise Palæst. p. 314.

*Cerastes vipera* Bouleng. t. c. p. 503.

Northern border of the Sahara, from Algeria to Egypt, Sinai.

4. ECHIS.

Merr. Tent. p. 149; Bouleng. Cat. Sn. iii. p. 504.

Two species:—

Scales on snout and vertex more or less strongly keeled; 2 (rarely 1 or 3) series of scales between eye and upper labials; ventrals 132-192 .....	<i>E. carinatus.</i>
Scales on snout and vertex smooth or obtusely keeled; 3 or 4 series of scales between eye and upper labials; ventrals 174-205 .....	<i>E. coloratus.</i>

1. ECHIS CARINATUS.

*Pseudoboa carinata* Schneid. Hist. Amph. ii. p. 285.

*Echis carinatus* Bouleng. t. c. p. 505.

Desert and sandy districts of Africa north of the Equator; Southern Asia from Transcaspia and Arabia to India.

2. ECHIS COLORATUS Günth. P. Z. S. 1878, p. 978; Bouleng. t. c. p. 505.

Egypt, Socotra, Arabia, Palestine.